

## Professor Jehoshua Kugler (1916-2007)

(modified from an article published in Israel Journal of Entomology (1985) honoring Prof. Kugler on the occasion of his 70<sup>th</sup> birthday)

Professor Jehoshua Kugler passed away in Tel Aviv on October 24, 2007. He was born in Chortkov, Galicia (then in Austro-Hungary, now within Ukraine) on February 1, 1916, and grew up in Czernowitz (then in Romania, now in Ukraine). In 1934, shortly after matriculating, he emigrated to what was then Palestine. In the same year, almost without any knowledge of Hebrew, he began studying at the Hebrew University of Jerusalem. Within four years, and while struggling with the language, he completed his M.Sc. degree in zoology, with botany and geology as minors. Kugler's M.Sc. thesis, on the Vespiformes of Jerusalem, supervised by Prof. F .S. Bodenheimer, won the prize of the Science Society of Tel Aviv.

In 1939 Kugler also completed his studies toward a teaching certificate. From 1939 to 1947 he taught biology at the Agricultural High School and from 1947 to 1960 he taught zoology at the "E. Shein" Teachers' Training College.

From 1956 to 1960 Kugler worked on a study entitled: "A taxonomic and faunistic study of the tachinid flies of Israel" at the Hebrew University of Jerusalem and supervised by Prof. O. Theodor, for which he was awarded his Ph.D. In 1954 he joined the then small faculty of the Department of Zoology at the newly-established Tel Aviv University, as a lecturer in zoology. In 1962 he was promoted to senior lecturer; in 1969 to associate professor and in 1979 to full professor. His previous broad experience in teaching also contributed to his activities at the university, and between 1956 and 1969 he taught methodology for high school zoology teachers at the university's Department of Education. The list of courses he taught since becoming a lecturer at the Department of Zoology has probably surpassed that of any other faculty member. It ranged from such general courses as introduction to the invertebrates, general and faunistic entomology and introduction to taxonomy, to more specialized courses such as social insects, Diptera, aquatic insects and many others.



Kugler started publishing scientific papers rather late in his career. However, the list of entomological topics and groups dealt with by him is astonishingly wide and seldom attempted by scientists nowadays. The greater part of his research work, following his Ph.D. studies, was devoted to the taxonomy and biology of one family of parasitic flies, the Tachinidae. Before Kugler began his studies, the list of locally known species of this dipterous group contained some 30 names. Following his studies, published in about a dozen papers, the list increased to around 300 species, proving the Tachinidae to be one of the largest insect families in Israel's fauna. Fifty new species and nine new genera of Tachinidae were described in the course of this study. After the Tachinidae, the Chironomidae formed the second group of interest for him. One interesting outcome of the chironomid study was the demonstration of an unusually high frequency of Afrotropical elements in the freshwaters of the northern Jordan Valley in Israel. This reaches 48% in Lake Kinneret, and 60% in the Hula Nature Reserve, thus demonstrating the unique zoogeographic allocation of Israel. Kugler's own interest in the Diptera was not, however, restricted solely to the above-mentioned families. In 1969 he published a comprehensive list of the Muscidae of Israel, a group of considerable economic and medical importance, and in 1978 he published a monograph on the Rhinophoridae of Israel, a small group of parasitic flies of great scientific interest. Twenty-two species were recorded in the latter paper, making Israel one of the richest countries in rhinophorids. Twelve species and three genera were described as new.

His work on the Tachinidae and other groups placed him among the top figures associated with this field in Israel and elsewhere. This work served as a model to several graduate students who, for over 20 years, under his supervision, surveyed various taxa of insects in Israel, manifestly increasing our taxonomic and faunistic knowledge of them. These taxa comprised caddis-flies (Trichoptera), may-flies (Ephemeroptera), ant-lions and their like (Neuroptera), termites (Isoptera) and several families of flies (Chironomidae, Tephritidae, Syrphidae, and Chloropidae). In recognition of his contributions to the taxonomic study of insects, many species have been named after him.

Other areas covered by Kugler's research and publications included the biology of parasitic wasps, biology of phytophagous insects that feed on weeds, and biology of social wasps. While still working primarily on the Diptera, he maintained both an interest and fondness for the Hymenoptera, and especially the social Hymenoptera. It was this that seems to have led him around 1980 to "abandon" the Diptera and leave the faunistic and taxonomic study of this group in Israel in my hands. He now turned his attention solely to the taxonomy of the ants of Israel, and this was to become his main occupation in the years that followed. He published seven articles on the subject

(including the one in this volume).

One of his greatest achievements, and perhaps the greatest, was the compilation and editing of the weighty volume on Insects of the *Encyclopedia of the Plant and Animals of the Land of Israel* (Kugler, 1989), to which he devoted about a decade of work and of which he himself wrote about half of the entries. This book (together with the other eleven volumes of the "Encyclopedia") was sold in tens of thousands copies and immediately became the standard textbook for insect faunistic courses at Tel Aviv University as well as for other purposes, replacing the American and European English textbooks that had been used there until then.

Most of Kugler's scientific publications were written in English. However, his proficiency in several European languages allowed him to write several publications in German and French. Despite his initial difficulties in mastering the Hebrew language, he subsequently published many articles, reports and encyclopedia items in Hebrew. These latter publications reflect, once again, his orientation towards the education of the general public.

Kugler both enjoyed field work and considered it as an important part of an approach that fosters the study of the entire organism, incorporating also laboratory work, collections, taxonomy and faunistics. He led many collecting expeditions in Israel and abroad and after his retirement joined excursions in the field led by others. Two major expeditions, in which we both participated, were to the Sinai (1969) and to Africa (1971-2), and these two, especially the latter, affected significantly my own choice of career.

Kugler officially retired in 1988, but as a professor emeritus he maintained his office, continuing to teach for a number of years and continuing his research practically to the last moment.

Kugler constantly involved himself in additional activities both within and outside Tel Aviv University. His interest in higher education drew him, for more than a decade, to chair the committee for graduate studies of the Department of Zoology, during which period he engaged with scores of students and their problems. This led him, in 1973, to chair the faculty committee for M.Sc. studies, a position he held until 1976. In addition, during 1973, he served as deputy dean of the faculty. He also participated and served on other departmental committees, and his voice was always heard when matters of principle arose.

Among his other activities, one can mention his chairing of the Israel Society of Zoology (1970-1972), membership of the Fauna Palaestina Committee of the Israel Academy of Sciences and Humanities (from 1971 until his death), membership of the International Advisory Committee of the journal "Entomologica Germanica" (1974-

1984), and director of the "National Collection of Insects" (1984-1988).

Although Kugler devoted most of his time to university work and to entomology, he divided what free time he had among a diversity of interests no less varied than those associated with his work. He was a dedicated reader, in several languages, of which Yiddish was a favourite; he enjoyed poetry as well as prose and was also a keen theatre buff. He was interested in internal and foreign affairs and, based on his broad historical knowledge and perspective, he usually expressed strong opinions concerning political events and developments, both in Israel and abroad. His broad knowledge and wit made him enjoyable company, and this was augmented by his endless capacity for telling jokes appropriate to every situation.

Kugler was a devoted family man who, together with his wife Ida, took care both of their two children, Rachel and Moshe as well as his mother (until her death at the age of 90, in 1976). Together, Ida and he have four grandchildren and three great-grandchildren, the youngest one born only a few months ago. We mourn Kugler's death and wish his family members a long and happy life.

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